

ABSTRACT

A Bismuth glass composition including 0.5 to 14 wt% of SiO_2 , 3 to 15 wt% of B_2O_3 , 4 to 22 wt% of ZnO , 55 to 90 wt% of Bi_2O_3 and 4 wt% or less of Al_2O_3 , and further including 5 wt% or less of an oxide of Group A, 12 wt% or less of an oxide of Group B and 0.1 to 10 wt% of an oxide of Group C, wherein the oxide of Group A is at least one selected from the group consisting of Li_2O , Na_2O and K_2O , the oxide of Group B is at least one selected from the group consisting of MgO , CaO , SrO and BaO , and the oxide of Group C is at least one selected from the group consisting of Sc_2O_3 , Y_2O_3 , La_2O_3 , CeO_2 , Pr_2O_3 , Nd_2O_3 , Sm_2O_3 , Eu_2O_3 , Gd_2O_3 , Tb_2O_3 , Dy_2O_3 , Ho_2O_3 , Er_2O_3 , Tm_2O_3 , Yb_2O_3 and Lu_2O_3 .